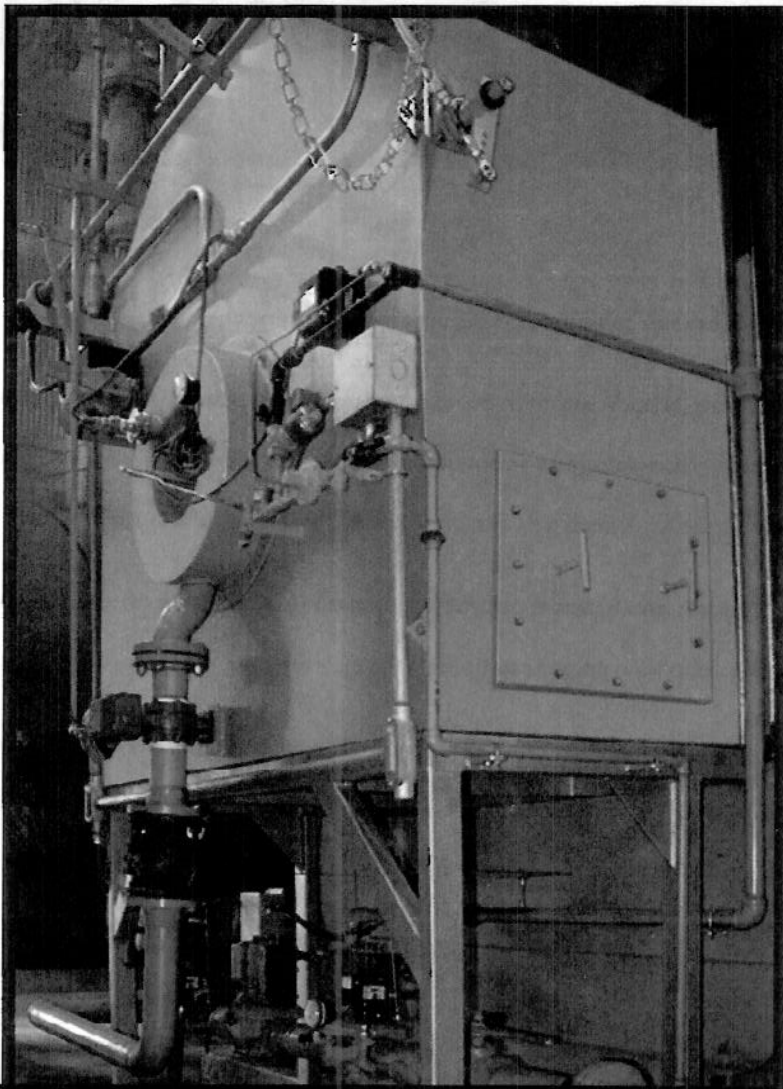
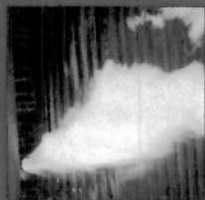


Optiflam e

FORNEY



FORNEY COMBUSTION PRODUCTS
COMBUSTION SYSTEMS



COMBUSTION PRODUCTS AND COMBUSTION SYSTEMS

Forney is a world leader in combustion products and combustion systems. For more than 70 years, Forney has been designing, manufacturing, installing, and servicing the most innovative and complete line of combustion-related equipment, including:

- Burner Management Systems
- Flame Detectors
- Igniters
- Burners
- Duct Burners
- Continuous Emissions Monitoring System

Complementing this product line is an equally impressive level of project management and engineering. From custom engineering through user training and ongoing field support, Forney is committed to total customer satisfaction.

THE WORLDWIDE LEADER. Forney facilities include a modern 180,000-square foot manufacturing plant with on-site combustion research and test facilities.

For combustion products and systems, no one can match Forney's product breadth and capability. The industry's most comprehensive and innovative line of products is backed by Forney's unparalleled responsiveness to our customers' needs.

Let us show you what our uncompromising commitment to customer satisfaction can mean to you.

BURNER MANAGEMENT SYSTEMS



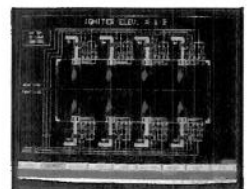
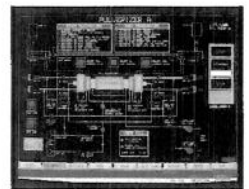
Forney is the leading supplier of burner management systems with thousands of installations worldwide. From stand-alone applications to systems seamlessly integrated into the plant's automation system, Forney equipment helps manage and protect the combustion process with

- Continuous safety monitoring
- Sequenced startup and shutdown interlocks
- Highly visible operator prompts
- Fully redundant power supplies and processors
- Prevention of boiler explosion

Forney systems are in use with the complete spectrum of fuels, including coal, gas, oil, black liquor, wood, process byproducts, and refuse.

Forney integrates burner management into your choice of control system platform: programmable logic controllers (PLC), distributed control systems (DCS), and our own hardware designed specifically for burner management. Our major design criteria include interconnectability with existing systems and simplified plant operation through the automation system operator stations.

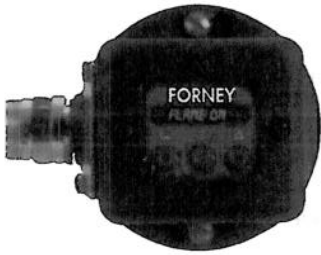
In every Forney system—even within a DCS environment—burner management is provided as a separate function. This assures that safety functions will always be performed independently of all other boiler controls.



THE PRODUCT LINE:

- ECS-1200 burner management system
- PLC-based burner management
- DCS-based burner management
- NFPA code compliance
- BLRBAC code compliance
- FM compliance

FLAME DETECTION



THE PRODUCT LINE:

**OptiFlame Burner
Diagnostic System
Digital Profile Detector
Dual Range Detector
IDD-IIU IR Flame Detector
UV-4 UV Flame Detector**

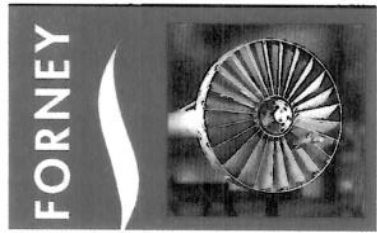
For safe boiler operation, it is imperative to know the status of the flame at all times. Forney manufactures a complete line of flame detectors and components to cover a full spectrum of applications.

Forney's approach to flame detection is exemplified by the innovative Digital Profile Detector—the industry's most advanced detector. This microprocessor-based unit "learns" the real-time digital profile of its actual target flames in three dimensions and uses fuzzy logic to determine flame-on and flame-off conditions. Its sophisticated technology makes the Digital Profile Detector (DPD) exceptionally easy to use. Self-diagnostics, pushbutton programming, and Forney's SMARTDisplay™ save hours of time aiming and setting up the instrument.

The OptiFlame Burner Diagnostic System is leading-edge software that uses the DPD's advanced technology to show air/fuel distribution for each flame. The results are reduced NOx emissions, reduced fuel costs, and improved unit efficiency. OptiFlame makes the traditional, cumbersome methods of burner balancing obsolete and enables plant engineers to monitor burner performance continuously and to anticipate changes in boiler performance.

Forney flame detectors provide certainty and security in any application: with oil, coal, or gas fuels, in multiple burner environments; in front-fired, opposed, down-fired, or tangentially fired configurations. We also provide detector amplifiers, fiber-optic assemblies, and all hardware necessary for a complete flame detection system.

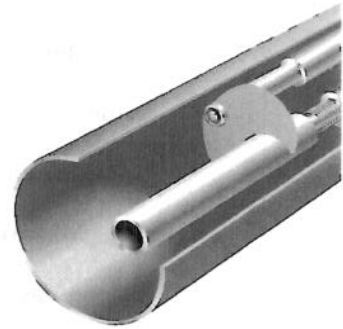
IGNITION EQUIPMENT



Reliable igniter performance is of paramount importance to ensure safety and to minimize emissions. Today's regulatory climate dictates optimum combustion of fuel at all stages of operation, even during lightoff and warmup. Forney's unmatched experience in burner ignition and support equipment assures you of dependable performance.

Forney manufactures a complete line of igniters for virtually every burner type. Forney igniters feature our dependable High Energy Spark Igniter (HESI) system. The HESI produces a 12-joule, self-cleaning spark, assuring lightoff even in hostile environments. And, the removable HESI spark tip unscrews for easy replacement and simple maintenance.

Forney gas- and oil-fired igniters are available in a variety of configurations with capacities ranging from 0.5 MBtu/hr. The extensive Forney line of igniter equipment is designed to give you flexibility and reliability, with low maintenance and operating costs.



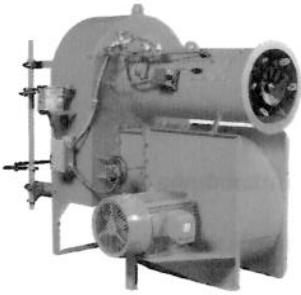
THE PRODUCT LINE:

- High Energy Spark Igniter (HESI)
- Portable HESI
- MAXFire Gas Igniters
- HEA Gas Igniter
- Q87 Oil & Gas Igniters
- GP Oil Igniter
- Horn Igniters
- Dual Fuel Igniter
- Light Up Burner/Igniter
- CE Approved

BURNER SYSTEMS & EQUIPMENT

Forney's extensive combustion research has created some of the industry's most effective burners and support equipment.

LOW NOX BURNERS The Forney NOxMiser Low NOx Burner is a highly efficient, state-of-the-art, low NOx burner system. NOxMiser, with its unique fuel-staging technique, reduces NOx emissions to less than 20 ppm with minimum flue-gas recirculation. NOxMiser accomplishes these significant NOx reductions while maintaining stable combustion conditions and limiting CO and other air pollutant emissions to extremely low levels.



THE PRODUCT LINE:

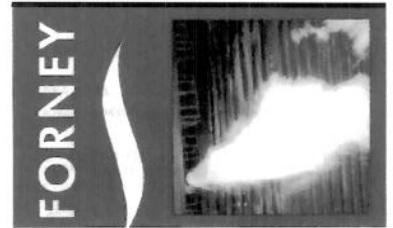
**NOxMiser Burners
for oil and natural gas**

- Branched Element Duct Burner for natural gas
- In-Line Duct Burner for oil and natural gas
- In-Duct Burner for oil
- Dual Fuel Duct Burner for two-fuel firing
- Gas Nozzles

Oil Guns

NOxMiser Burners provide solutions covering the entire boiler market. Burners for firetube and firebox boilers are available from 40 to 1500 hp. Burner packages for watertube boilers are also manufactured, with capacities and performance covering the entire range of requirements. Register-type burners for multiburner industrial and utility boilers are available in capacities up to 300 MBtu/hr. They can be used as multiple burners operating as one, or as individual burners with an isolation damper.

DUCT BURNERS. Forney Duct Burners provide the latest technology to meet the complex needs of the combined cycle and cogeneration industry. Our exclusive branched element design features a single-source ignition point that not only improves light-off reliability but also reduces costs by eliminating the need for multiple pilot and detector systems.

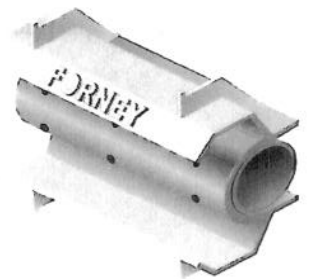


Forney Duct Burners are engineered for superior performance and constructed to the highest industrial standards. The products are supported by our worldwide service and support staff. Models are available for gas, oil, and combination fuels.

Forney Duct Burners range in capacity from 3 to 700 MBtu/hr. With a versatile modular design, they can be customized for any operating criteria: augmented air, fresh air operation, cogeneration, combined cycle, thermal oxidation, air heaters, or elevated pressure operation.

GAS NOZZLES AND OIL GUNS Customers around the world have turned to Forney's expertise when adding to or changing the fuel firing on their tangentially fired boilers. The Forney Gas Nozzle retrofits gas-firing capability to supplement or replace oil firing. The gas nozzle burner can be sized up to a capacity of 380 MBtu/hr and is compatible with low NOx applications.

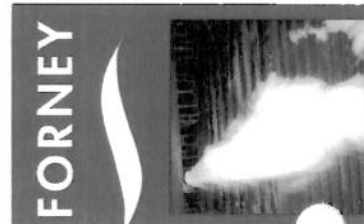
Forney's "T" and "Z" Outside Mix Oil Guns effectively atomize and disperse a fine mist of fuel oil for efficient combustion. Forney oil guns are used by burner manufacturers and for retrofit projects as sturdy liquid fuel delivery devices. Capacity ranges from 20 to 200 MBtu/hr.



THE FORNEY FLAME STABILIZER PROVIDES

PERFORMANCE CHARACTERISTICS INCLUDING:

- Low emissions of NOx and CO
- Low draft loss
- High turndown
- Wide range of operating conditions
- Ability to operate in harsh environments



ENVIRONMENTAL MONITORING



COLUMBIA SCIENTIFIC CEMS Continuous emissions monitoring systems (CEMS) and air quality instruments provide data which allows the precise level of pollutants to be measured and permits power plants and combustion processes to operate at environmentally safe levels. Continuous process monitors provide real-time gas measurement for feedback control of combustion and manufacturing processes. A variety of support equipment is available including equipment shelters, air clean-up systems, and data acquisition instrumentation. (Columbia Scientific Continuous Emissions Monitor pictured at left) Support services assist our customers in meeting their individual environmental agency reporting requirements.

COLUMBIA SCIENTIFIC AMBIENT AIR INSTRUMENTS. Our EPA-designated toxic and hazardous gas emission monitors indicate ambient air quality and are used to detect pollutants in the air we breathe.

THE PRODUCT LINE

- Continuous Emissions Monitoring Systems (CEMS)
- Model 7000 FT-IR Multi-Component Analyzer
- Model 5600 NO, NO₂, NO_x Analyzer
- Model 5200 SO₂ Analyzer
- Model ZRH CO₂ and/or CO Analyzer
- Ambient Analyzers for All Criteria Pollutants
- Audit Calibrators and Air Supplies

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